

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A micro TPV generator for generating an electric current in response to combustion of a fuel comprising, in combination:
 - an inlet and a combustor downstream from the inlet, wherein the combustor comprises a first section and a second section positioned between the inlet and the first section, wherein a cross-sectional width of the first section is greater than a cross sectional width of the second section;
 - the first section forms an internal chamber having an outer wall, and an internal expansion step comprises transitioning from the second section to the first section, and combustion of the fuel occurs at the first section;
 - an emitter formed around the outer wall, wherein the emitter is capable of generating photons; and
 - a photovoltaic cell in proximity to the emitter, which begins at the transition step, extends along the first section and generates the electrical current depending on photons incident thereon.
2. (Previously Amended) A micro TPV generator as claimed in claim 1 wherein the internal chamber comprises a platinum catalyst coating an inner wall thereof.
3. (Previously Amended) A micro TPV generator as claimed in claim 2 wherein the outer wall is substantially cylindrical.
4. (Previously Amended) A micro TPV generator as claimed in claim 3 wherein the expansion step is a backwards facing step.

5. (Previously Amended) A micro TPV generator as claimed in claim 4 wherein the emitter has an emission characteristic matched to a bandgap characteristic of the photovoltaic cell.

6. (Previously Amended) A micro TPV generator as claimed in claim 5 wherein the emitter is formed of Co--/Ni-doped MgO ribbon or tape.

7. (Previously Amended) A micro TPV generator as claimed in claim 5 wherein the emitter is formed of SiC.

8. (Previously Amended) A micro TPV generator as claimed in claim 5 further comprising a filter between the emitter and the photovoltaic cell configured to pass photons above a threshold and reflect photons under the threshold.

9. (Previously Amended) A micro TPV generator as claimed in claim 8 wherein the filter comprises 9 layers of Si--SiO₂ bonded between a glass slide and the photovoltaic cell.

10. (Previously Amended) A micro TPV generator as claimed in claim 9 wherein the photovoltaic cell is formed from a GaSb based semiconductor.

11. (Previously Amended) A micro TPV generator as claimed in claim 1 wherein the internal chamber has an internal diameter less than 1 mm when the fuel is hydrogen fuel at compressed pressure.

12. (Previously Amended) A micro TPV generator as claimed in claim 1

wherein the internal chamber has an internal diameter less than 3 mm when the fuel is propane at atmospheric pressure.

13. (Currently Amended) A micro TPV generator as claimed in claim 1 ~~wherein the emitter is positioned remote from the second section.~~ further comprising a filter positioned between the emitter and the photovoltaic cell configured to pass photons above a threshold and reflect photons under the threshold, wherein the filter begins at the transition step and extends along the first section.

14. (Currently Amended) A micro TPV generator as claimed in claim 13 ~~wherein the internal chamber comprises a first tubular section and a second tubular section, wherein the first tubular section has a diameter that is greater than a diameter of the second tubular section and the expansion step is formed from the second tubular section to the first tubular section.~~ first section has an end opposite the transition step, and both the photovoltaic cell and the filter end at the end of the first section.

15. (Previously Amended) A micro TPV generator as claimed in claim 1 wherein the photovoltaic cell is fabricated from one or more of:
InGaSb, and
InGaAsSb.

Claim 16 (Cancelled).

17. (Previously Amended) A micro TPV generator as claimed in claim 5 wherein the combustor comprises SiC.

18. (Currently Amended) The micro TPV generator of claim 1 wherein the emitter is formed as part of the combustor.

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19. (Previously Amended) A micro TPV generator as claimed in claim 1 comprising a hexagonal cell arrangement.